REMARKS

Applicants gratefully acknowledge the Examiner's indication that claims 8-13 and 15 are allowed.

Applicants have amended claim 1.

Accordingly, claims 1-15 remain pending in the application.

Reexamination and reconsideration of the present application are requested.

REQUEST TO WITHDRAW FINALITY OF OFFICE ACTION

The M.P.E.P. states that:

> "Under present practice, second or any subsequent actions on the merits shall be final, except where the examiner introduces a new ground of rejection that is neither necessitated by applicant's amendment of the claims nor based on information submitted in an information disclosure statement filed during the period set forth in 37 CFR 1.97(c) with the fee set forth in 37 CFR 1.17(p)."

M.P.E.P. § 706.07 (emphasis added).

In this case, for the first time, the "Final" Office Action dated 24 October 2003 rejects claim 4 under 35 U.S.C. § 102 as allegedly being anticipated by Maekawa U.S. Patent 5,868,866 ("Maekawa")..

No such basis for a rejection of claim 4 appeared in any previous Office Action in this case.

This is a new ground for rejection of claim 4. This new ground for rejection was absolutely **not** necessitated by any amendment to claim 4, since neither claim 4, nor claim 1 from which it depends, had ever been amended prior to this amendment.

So, the rejection of claim 4 under 35 U.S.C. § 102 over Maekawa is a "new ground of rejection that is" not "necessitated by applicant's amendment of the claims"

as this rejection could have been made on claim 4 in any previous Office Action.

Therefore, Applicants respectfully submit that the "Finality" of the Office Action dated 24 October 2003 is improper.

Accordingly, for at least this reason, Applicants respectfully request that the Examiner withdraw the holding of Finality of the Office Action dated 24 October 2003.

35 U.S.C. § 102

The Office Action rejected: claims 1, 2 and 4-7 under 35 U.S.C. § 102 over Maekawa et al. U.S. Patent 5,868,866 ("Maekawa"); claims 1, 5-6 and 14 under 35 U.S.C. § 102 over Nishimura et al. U.S. Patent 5,829,087 ("Nishimura '087"); and claims 1-6 and 14 under 35 U.S.C. § 102 over Nishimura et al. U.S. Patent 6,286,525 ("Nishimura '525").

Applicants respectfully traverse those rejections for at least the following reasons.

Maekawa

Claim 1

Among other things, the device of claim 1 includes a second injector disposed adjacent to the brush along one side of the brush arm so as to move together with the brush arm.

Applicants respectfully submit that Maekawa does not disclose a device having these features.

At the outset, Applicants respectfully submit that **Maekawa clearly teaches that element 34 is a "sponge" rather than a brush** (col. 4, lines 52-56; col. 5, lines 5-8, 19-43). Indeed, Maekawa also clearly teaches that a completely different configuration is employed when a brush 72 is used instead of the sponge 34 (see FIG. 6). The Examiner has never cited the completely different configuration of FIG. 6 as allegedly disclosing anything with respect to Applicants' claimed invention, and

indeed FIG. 6 of Maekawa bears no resemblance to the device of claim 1. Applicants have already pointed this out to the Examiner in the response to the previous Office Action, but the Examiner has failed to acknowledge this point. Accordingly, at this time, **Applicants respectfully request that the Examiner provide some citation to something in Maekawa that discloses that element 34 is a brush, or withdraw the rejection of claim 1 under 35 U.S.C. § 102**.

Meanwhile, the Examiner has identified element 20a as supposedly corresponding to the second injector and element 32 as supposedly corresponding to the recited brush arm. At the outset, **elements 20 and 20a are not injectors**, as recited in claim 1. Elements 20 and 20a are nozzles, and are clearly and consistently referred to by Maekawa as nozzles (see Maekawa at col. 4, line 38, 66; col. 6, lines 13-18; col. 7, lines 7-1, 24-25; col. 8, lines 1-25), such as are also recited in claim 1. Maekawa never refers to either element 20 or 20a as an injector. Indeed, the actual first and second injectors in Maekawa are the unlabeled pipes that are respectively connected to the nozzles 20 and 20a in FIG.2.

In any event, inspection of FIG. 2, cited in the Office Action, shows that the "second injector" 20a is not disposed along one side of the arm 32 and does not move together with the arm 32. Furthermore, the actual second injector shown in FIG. 2 (the pipe connected to nozzle 20a) is also not disposed along one side of the brush arm 32 and also does not move together with the brush arm 32.

Also, the device of claim 1 includes a brush that cleans the wafer during a linear horizontal movement between a center and edges of the wafer.

Applicants respectfully submit that Maekawa does not disclose a device having this feature.

Moreover, Applicants respectfully submit that the sponge 34 moves in an arc, and certainly does not clean the wafer during a linear horizontal movement. Furthermore, the sponge 34 does not appear to move between a center and edges of the wafer. Indeed, from inspection of FIG. 2, it would appear that the sponge 34

cannot move to an edge of the wafer as it would be impeded by the clamping member 11. Applicants see no teaching in Maekawa that the sponge 34 cleans the wafer during a linear horizontal movement between a center and edges of the wafer.

The above features being deemed more than sufficient to distinguish the device of claim 1 from Maekawa, Applicants do not deem it necessary at this time to address all of the other distinctions between the device of claim 1 and Maekawa.

Accordingly, for at least these reasons, Applicants respectfully submit that claim 1 is patentable over Maekawa.

Claims 2 and 4-7

Claims 2 and 4-7 depend from claim 1 and are deemed patentable over Maekawa for at least the reasons set forth above with respect to claim 1, and for the following additional reasons.

Claims 4 and 7

Among other things, in the device of claim 4 the brush arm moves in a direction parallel to a linear orientation of the first injector, and in the device of claim 7 the brush moves perpendicularly with respect to a direction along which the first injector extends.

Applicants respectfully submit that Maekawa does not disclose a device having these features.

As noted above, elements 20 and 20a are not injectors as defined and described in the present specification and claims, and indeed, Maekawa repeatedly and consistently identifies elements 20 and 209a as **nozzles**. The injectors in Maekawa are the unlabeled pipes that are connected to the nozzles 20 and 20a in FIG. 2.

Furthermore, Maekawa fails to make any specific mention as to the direction or orientation of the unlabeled pipes (injectors) shown in FIG. 2. However, inspection of FIG. 2 indicates that neither the sponge 34 nor the arm 32 move either in a parallel direction or a perpendicular direction with respect to a direction along which the first injector extends.

Accordingly, for at least these additional reasons, Applicants respectfully submit that claims 4 and 7 are patentable over Maekawa.

Nishimura '087

Claim 1

Among other things, the device of claim 1 includes a second injector disposed adjacent to the brush along one side of the brush arm so as to move together with the brush arm.

Applicants respectfully submit that Nishimura '087 does not disclose a device having these features.

Inspection of FIG. 2, cited in the Office Action, clearly shows that the "second injector" 6 (which is actually identified by Nishimura '087 as a **nozzle 6**) is not disposed adjacent to the brush along one side of the brush arm 7 so as to move together with the brush arm 7.

The above features being deemed more than sufficient to distinguish the device of claim 1 from Nishimura '087, Applicants do not deem it necessary at this time to address the other distinctions between the device of claim 1 and Nishimura '087.

Accordingly, for at least these reasons, Applicants respectfully submit that claim 1 is patentable over Nishimura '087.

Claims 5-6 and 14

Claims 5-6 and 14 depend from claim 1 and are deemed patentable over Nishimura '087 for at least the reasons set forth above with respect to claim 1, and for the following additional reasons.

Claim 14

Among other things, in the device of claim 14, the first injector extends along a radial direction from an edge of the wafer toward the center of the wafer, and ejects the pure water onto a central portion of the wafer.

Applicants respectfully submit that Nishimura '087 does not disclose a device having these features.

The Office Action cites col. 5, lines 50-53 and FIG. 2 as supposedly disclosing these features.

Applicants respectfully disagree.

Col. 5, lines 50-53 only discloses that the nozzles 6 are arranged for delivering a cleaning liquid toward the center of wafer W. It does not disclose that any injector ejects the pure water **onto** a central portion of the wafer. Meanwhile, inspection of FIG.2 indicates that the nozzles 6 do not extend along a radial direction from an edge of the wafer toward the center of the wafer W- indeed, they barely extend over the cup 5 and do even extend to an edge (or any other portion) of the wafer W, so they cannot possible extend "from an edge of the wafer toward the center of the wafer W" as recited in claim 14.

Accordingly, for at least these additional reasons, Applicants respectfully submit that claim 14 is patentable over Nishimura '087.

Nishimura '525

Claim 1

Among other things, the device of claim 1 includes, in combination, a **first** injector in a fixed position so as not to move together with the brush arm, and a **second** injector disposed adjacent to the brush along one side of the brush arm so as to move together with the brush arm.

Applicants respectfully submit that Nishimura '525 does not disclose any device having these combination features.

With respect to the embodiment of FIG. 2, the Office Action has identified element 6 as supposedly corresponding to the second injector and element 7 as supposedly corresponding to the recited brush arm. Inspection of FIG. 2 clearly shows that the "second injector" 6 is not disposed along one side of the brush arm 7 so as to move together with the brush arm 7.

With respect to the embodiments of FIGs. 12-18, none of these embodiments shows a first injector in a fixed position so as not to move together with the brush arm. In these embodiments, both of the so-called injectors 20 and 30 "are attached to

the support arm 7," and that "cleaning devices 8,20 and 30 are placed in the cleaning state, and simultaneously moved" so that "the entire surface of the wafer W may be cleaned simultaneously by all of the cleaning devices 8, 20 and 30" (col. 9, lines 20-35).

So, none of the devices disclosed by Nishimura '525 included the above-mentioned unique combination of features of claim 1.

The above features being deemed more than sufficient to distinguish the device of claim 1 from Nishimura '525, for brevity Applicants do not deem it necessary at this time to address all of the other distinctions between the device of claim 1 and Nishimura '525.

Accordingly, for at least these reasons, Applicants respectfully submit that claim 1 is patentable over Nishimura '525.

Claims 2-6 and 14

Claims 2-6 and 14 depend from claim 1 and are deemed patentable over Nishimura '525 for at least the reasons set forth above with respect to claim 1, and for the following additional reasons.

Claim 4

Among other things, in the device of claim 4, the brush arm moves in a direction parallel to linear orientation of the first injector. Inspection of FIG. 2 of Nishimura '525 shows that such a feature is not present in the device of Nishimura '525.

The office Action states that "since the **nozzles** are attached to the brush arm in FIGs. 10-18, they inherently move in a parallel direction ." However, that is **not what Applicants have claimed**. Claim 4 does not recite that the brush arm moves in a direction parallel to the nozzle. Instead, claim 4 recites that the brush arm moves in a direction parallel to **linear orientation of the first injector**.

Once again, Applicants respectfully submit that Nishimura '525 does not disclose a device having this feature.

CONCLUSION

In view of the foregoing explanations, Applicants respectfully request that the Examiner reconsider and reexamine the present application, allow claims 1-15, and pass the application to issue. In the event that there are any outstanding matters remaining in the present application, the Examiner is invited to contact Kenneth D. Springer (Reg. No. 39,843) at (703) 715-0870 to discuss these matters.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 50-0238 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17, particularly extension of time fees.

Respectfully submitted,

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Date: 16 January 2004

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